

WHAT IS CLAIMED IS:

1. A method of dynamically adjusting a printer, the method comprising:
printing onto a medium;
collecting pixel values over an area of the medium;
calculating statistical metrics of histograms of the pixel values; and
applying metric criteria against the statistical metrics by adjusting print density.
2. The method recited in claim 1 wherein the printer prints with dots.
3. The method recited in claim 1 wherein the area contains stealthy dots.
4. The method recited in claim 1 wherein the collected pixel values are shifted and scaled.
5. The method recited in claim 1 wherein the printing and the collection of pixel values are performed substantially simultaneously.
6. The method recited in claim 1 wherein the step of applying metric criteria comprises steps of determining optical density over the area and of comparing optical density to a predetermined density.
7. The method recited in claim 1 wherein the applied metric criterion is bimodal symmetry where median of the pixel values equals mean of the pixel values.
8. The method recited in claim 8 further comprising a step of adjusting print density based on the bimodal symmetry point as 50% of visual dark threshold.

9. The method recited in claim 1 further comprising a step of adjusting print density to a visual dark threshold determined as median of the pixel values when a single dark mode remains in the histogram.
10. The method recited in claim 1 wherein the metric criterion is relative height of a dark modal peak to that of a light modal peak to determine degree of adjustment of the print density.
11. A printing apparatus comprising:
printing means for printing on a medium;
a sensor for collecting pixel values over an area of the medium; and
a processor, connected to the sensor, for calculating statistical metrics of histograms of the pixel values and applying metric criteria against the statistical metrics by adjusting print density.
12. The apparatus recited in claim 11 wherein the printer prints using dots.
13. The apparatus recited in claim 11 further comprising storage for storing the collected pixel values.
14. The apparatus recited in claim 11 wherein the area contains stealthy dots.
15. The apparatus recited in claim 11 wherein the processor shifts and scales the pixel values.
16. The apparatus recited in claim 11 wherein the printing means and the sensor operate substantially simultaneously.

17. The apparatus recited in claim 11 wherein the processor further applies the metric criteria by determining optical density over the area and of comparing the optical density to a predetermined density.
18. The apparatus recited in claim 11 wherein the applied metric criterion is bimodal symmetry where median of the pixel values equals mean of the pixel values.
19. The apparatus recited in claim 18 wherein the print density is adjusted based on the bimodal symmetry point as 50% of visual dark threshold.
20. The apparatus recited in claim 11 wherein the print density is adjusted to a visual dark threshold determined as median of the pixel values when a single dark mode remains in the histogram.
21. The apparatus recited in claim 11 wherein the metric criterion is relative height of a dark modal peak to that of a light modal peak to determine degree of adjustment of the print density.